

State Of Tennessee

Cost Benefit Analysis Methodology

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Information Systems Planning Overview

The State of Tennessee makes decisions on numerous information technology projects that are proposed each year. Decisions must be made on which projects are in the best interest of the State. To make those decisions, each project request must be evaluated on both its own merit and its relative priority to other State initiatives. To effectively evaluate each request, the State has formalized the project submission and justification process. This document outlines the standard mechanisms to be used not only to determine the costs of each large project, but also to determine the benefits and risks. The following guidelines describe the process for developing a complete Cost Benefit Analysis and project justification document for all large project requests.

These guidelines are intended for use by each State agency in assessing the costs, benefits, and risks of their proposed projects. The agency Information Systems Plan provides a framework for an agency's executive management to evaluate proposed projects and monitor costs and benefits during implementation. They also provide executive management within State government the information needed to prioritize projects on a statewide basis and recommend funding.

Project sponsors, as well as Management Advisory Committees (MACs), should be closely involved with the cost benefit analysis in their role as the responsible parties for ensuring that business objectives are met by projects within the estimated costs and with the specified benefits. It is vital that agency management is involved throughout the project lifecycle.

Project Planning

The approach to cost benefit analysis defined by this methodology focuses on information technology projects. However, the approach is also applicable to projects without information technology solutions. An essential concept is the need for a continuous update of the cost benefit analysis as the project proceeds through the life cycle from project initiation / planning (analysis) into design, construction, and implementation. A graphic depiction of this process is found in Appendix A. A description of key documents produced from the cost benefit analysis methodology is provided in Appendix B.

When a project is first defined and the cost impact measured, there are many variables that may not be known and others that will inevitably change. Since there is a tendency to underestimate costs because of unknown aspects, an allowance is built in to the methodology in the form of a confidence factor. The confidence factor is determined based on risk assessment and a careful consideration of the factors surrounding the project. The cost allowance based on the confidence factor is intended to consider unforeseen costs. Therefore, the costs must be re-estimated throughout the life of the project. At each point in the development life cycle, the costs should be validated and the confidence factors reviewed. This will not necessarily reduce the project costs because as unforeseen cost factors are uncovered, they may increase the total cost estimates. This re-estimation provides a more accurate cost of the project.

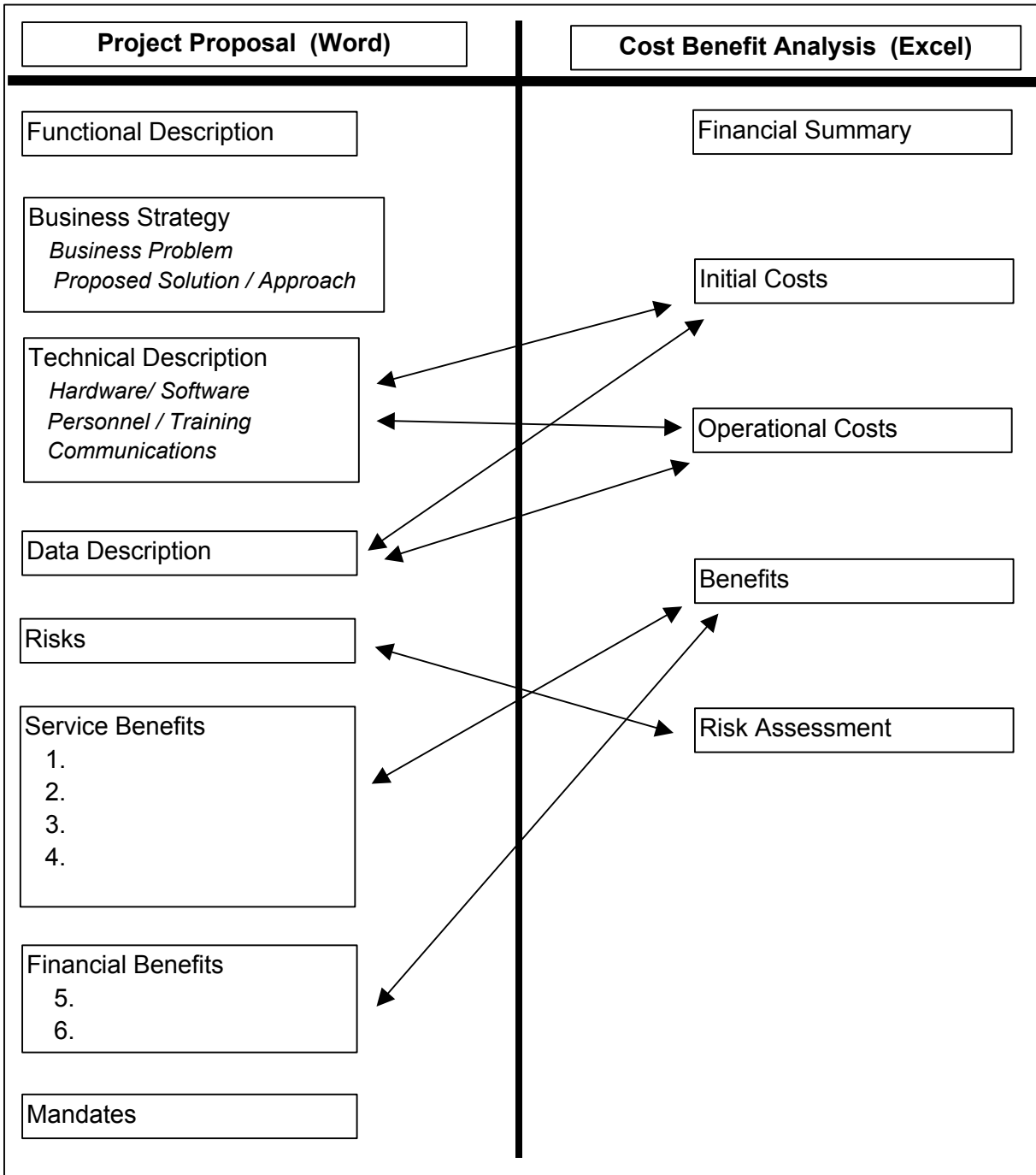
Budget/Fiscal Office Participation in Plan Development and Project Planning

As many financial decisions must be made throughout the life of a project, a designated contact point in the agency's Budget/Fiscal office can be a critical resource for the Information Systems Plan Coordinator and the IT Project Manager. The Budget/Fiscal contact can assist systems and business staff:

- 1) Determine available funding sources,
- 2) Ensure that project cost and revenue are budgeted,
- 3) Determine how project cost will be tracked.
- 4) Determine dollars spent to date on projects,

Project Proposal and Cost Benefit Analysis – A Partnership

The first step in project planning is to prepare a Project Proposal that will provide a business overview of the project (See Appendix C). Completing the Project Proposal requires an understanding of the business need, costs, benefits and risks of the project. The Project Proposal and the Cost Benefit Analysis combine to create the complete business plan for an information systems project. The following graph shows the link between the Proposal and Cost Benefit Analysis (CBA).



Initial and Operational Cost Assessments

Developing accurate cost estimates is a major task for the project manager. Since cost estimates drive the funding requests for the projects, underestimated costs can lead to delays in project approvals and funding issues. Therefore, costs used in developing the Initial Cost Assessment worksheet (See Appendix D) and the Operational Cost Assessment worksheet (See Appendix E) should be carefully developed and scrutinized. Cost estimates defined early in the project life cycle should be as thorough and accurate as possible so when the calculations are re-estimated in later phases, significant discrepancies do not exist.

The formulas in the Initial Cost Assessment worksheet apply one confidence factor to the Total Initial Costs lines. Confidence Factors may be applied to an individual cost item(s) or to the totals. If you apply confidence factors to individual cost items, note the amount of the confidence factor on the line where the factor was applied or in an explanation area. If you apply individual confidence factors to line items, the spreadsheet confidence factor applied to the totals should be set to 1.0.

Estimation Process

As the degree of estimation is more defined, the confidence factor should increase. To develop accurate cost estimates, the following three major activities should be performed in the estimating process:

- **Identification**
Define the cost categories associated with the project. Examples of cost categories are: personnel, hardware, software, security, communication, and training.
- **Estimation**
Estimate the initial and operational costs for each identified cost category. Then apply a confidence factor that is an indication of the degree of certainty in the initial costs estimates. A 90% confidence factor indicates a high degree of certainty that the estimates are correct since the initial cost estimates will only be increased by 10%. A confidence factor of 60% would indicate a lower degree of certainty and the costs would be increased by 40%. As costs become more certain, the confidence factor needs to be adjusted to reduce the allowance for error. Risk factors should also be considered during estimation and may impact the confidence factor. The default confidence factor is set at 80% in the CBA template.
- **Documentation**
Record all assumptions and calculations for subsequent review and future re-estimations. Explanations or supporting information should be contained within notes attached to cells within the cost worksheets. A breakout of Personnel costs can be explained in the notes, or by adding rows to the spreadsheet and identifying each line item.

Initial costs should be defined for “infrastructure” support areas such as the following:

- Infrastructure Project Management for LAN/WAN planning & deployment
- Infrastructure Project Management for Data Center systems planning & deployment
- Network technical support for areas such as bandwidth testing and application monitoring for acceptance prior to production.
- Systems technical support areas such as Data Center prep, equipment ordering, installation and setup, testing, and monitoring of system (application) performance prior to production.

Benefit Assessment

Achieving benefits equal to or in excess of costs is a factor in justifying the feasibility of a project. Identifying these benefits in the Benefit Assessment worksheet (See Appendix F) will include the following three steps:

- **Identification**

Identifying benefits requires system and business functions and features to be analyzed to determine specific potential benefits to the State. This identification step examines enhanced service benefits that provide opportunity gains through enhanced services to an agency's client group or enhanced revenue benefits through increased agency revenue, decreased cost, increased State revenue, cost avoidance, or cost redirection.

- **Estimation**

Of these benefits, only increased agency revenue and decreased costs generate hard dollar values. The benefits in these categories have either annual or one-time dollar values. As with costs, a confidence factor should be applied to the calculations of these benefits to reflect uncertainties.

- **Documentation**

Record all assumptions and calculations for subsequent review and future re-estimations. Explanations or supporting information should be contained within notes attached to cells within the Benefit Assessment worksheet.

It is the responsibility of the requesting agency to identify, estimate, and document the potential benefits. The Finance and Administration Budget Office will carefully review any increased agency revenue or decreased cost identified. Since the agency will be held responsible for realizing the identified benefits, it is mandatory that agency management approve the identified benefits. This is particularly true in the case of increased agency revenue or decreased cost used to offset funding of the project. A project may be justified on enhanced service benefits as a part of a State government initiative rather than increased agency revenue or decreased cost, even though a payback is not achieved within a 10-year window of time.

A key aspect of benefit assessment is achieving these benefits upon successful completion of the project. During the course of a project, it will be the responsibility of the agency to evaluate the achievement of the previously defined benefits and to ensure that those benefits are realized upon the completion of the project.

Risk Assessment

All projects inherently have some degree of risk that may affect the timely completion, cost, and quality of a project. The goal of risk assessment is to acknowledge and deal with high risk. A project with a significant benefit may have a good chance of approval in spite of a high risk of failure. Unless the risk is mitigated, the benefits are less likely to be realized and might be less significant than anticipated. The Risk Assessment worksheet (See Appendix G) is used to identify risks. Some risks are qualitative in nature, such as senior management support and involvement, degree of impact on the agency, etc. These factors must be considered to determine if the project is a high risk or normal risk project. If the project is judged to be high risk, the project manager must define an approach to mitigate those risk factors judged to be high.

A three-step process is used to identify risks:

- **Identification**

In the identification step, an evaluation is made of the areas of potential risk for a project. These will include the factors listed in the Risk Assessment worksheet, but may also include other risk factors that are unique to the project.

- **Classification**

In the classification step, each risk factor is reviewed and determined to be either high risk, normal risk, or not applicable. If any single factor is considered high, the entire project is considered high risk.

- **Documentation**

In the documentation step, the project manager should use the Project Proposal to document each high risk factor and the plan to mitigate the risk. Inherent in this risk mitigation narration is a description of how the project work plan supports the mitigation approach.

High risk factors may cause cost estimating difficulties for specific items in the cost categories. For example, a particular hardware item may have a wide range of costs resulting from rapidly developing technology. It may not be feasible to define a precise cost prior to defining in detail the needed requirements. To handle these types of risks, the project manager should include the risk on the Project Proposal along with a potential range of costs. The cost should be estimated on the Cost Assessment worksheets using the high end of the potential range and a note should be attached explaining the risk and impact on the cost estimate. High-risk projects may impact the confidence factor used in the Cost Assessment worksheets.

Financial Summary

The assessment of the costs, benefits, and risks associated with a project is summarized in the Financial Summary worksheet and referred to in the Project Proposal (See Appendix H). The Executive Summary portion of the Financial Summary worksheet details the new dollar cost of the project minus any increased agency revenue or decreased cost benefits. Funding sources are identified and subtracted from the net cost. Any unfunded portion of the cost is indicated as well as the year of payback - the point at which project benefits equal project costs. The Financial Summary also details Total Cost (new and existing) as well as funding sources to support that cost.

Project Review

After the cost benefit analysis is completed, the Project Proposal and Cost Benefit Analysis spreadsheet should be assembled together for review by management. Some key points to remember when assembling the project documentation are:

- Verify that key management individuals within the agency have reviewed the CBA and approve the assumptions.
- Verify that all assumptions, estimating factors, and confidence factors are well understood and documented.
- Verify that all-possible solutions and scenarios have been reviewed and the best alternative identified.
- Keep the documentation as complete and up to date as possible.
- Have more than one individual intimately familiar with the detail so that questions can be quickly addressed.

Project Authorization

1. Project Sponsor / Agency Budget/Fiscal Officer: The first step toward project authorization is approval of the Project Proposal and Cost Benefit Analysis by the Project Sponsor and the agency Budget or Fiscal Officer. It is important that funding for projects are clearly identified either as continuance funds already in the agency's budget or from other clearly identified sources as defined later in this document.
2. Management Advisory Committee (MAC): The second step in the project authorization process is action by the agency's MAC to prioritize the project in relation to other projects within the agency competing for resources. The MAC should also clearly understand the cost assumptions and benefits. After the agency has finalized the funding issues, consultation with the agency's F & A Budget Analyst on large projects would be appropriate so that he/she is aware of plans for funding and benefit realization.
3. IT Assessment & Budget Committee (IT ABC): The next step is review by IT ABC within the Department of Finance & Administration. MAC action in setting project priorities helps the IT ABC understand the relative importance of the project as prioritization and ranking of all project requests throughout State government takes place. Understanding by F & A Budget and OIR of the scope, cost, funding, and benefit considerations at earlier stages of the project will facilitate this review.

It is important to remember that the value of projects may be in the area of cost containment or revenue production; however, enhanced service can also be a critical indicator of project value. It is also important to remember that the cost benefit analysis that produces a positive financial return is not, in its own right, sufficient to gain project approval. Other factors that can affect the prioritization process are as follows:

- Administration priorities
- Availability of funding
- Financial return of the project in comparison to other requested projects

The detailed cost benefit analysis process is required regardless of the impact of any of these factors in the final prioritization process.

Monitoring Estimates

There are several points at which monitoring of estimates should occur:

- Actual costs should be compared to estimated costs at the end of each project phase.
- Actual costs and benefits should be compared to estimated costs and benefits at the completion of the project.
- Actual operational costs and annual benefits should be compared to estimated operational costs and benefits annually, or as defined.

These comparisons should be reviewed by the project sponsor and / or project manager and reported to any project review group(s), including the MAC. Explanations should be included along with the comparison if major discrepancies are noted. This process will help ensure all projects have met their expected savings and service objectives.

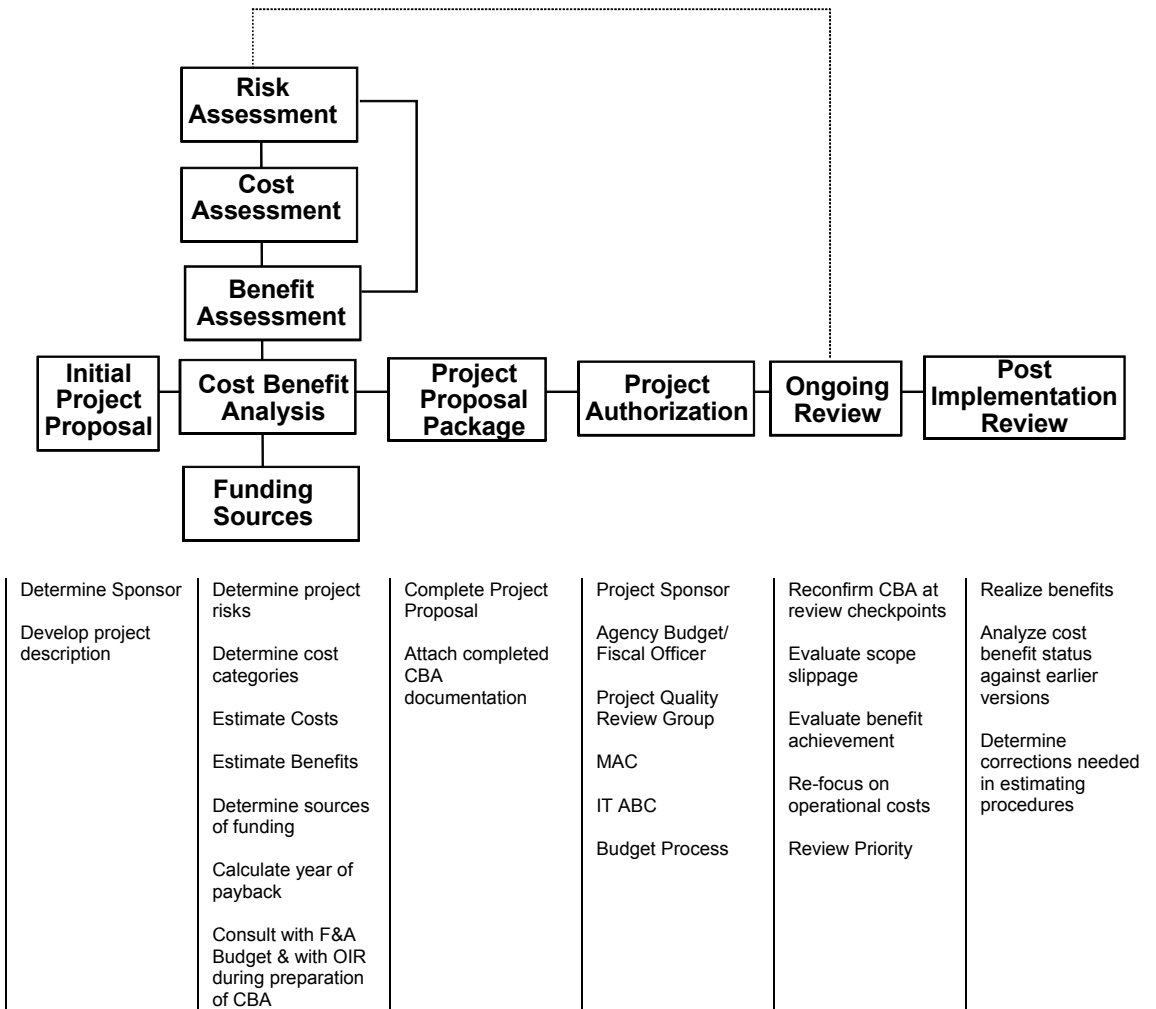
Cost Benefit Analysis Tool

OIR will provide a workbook (set of spreadsheets) to be used as a template to guide project managers through the cost benefit analysis. The following items pertain to the cost benefit workbook:

- One workbook should be used for each large project. The workbook contains five different worksheets - Financial Summary, Risk Assessment, Initial Cost Assessment, Operational Cost Assessment, and Benefit Assessment.
- The project number should be used as the workbook name.
- Documentation comments or notes should be attached to each appropriate cell.

The staff of OIR IT Planning and Research may be consulted on any issues related to either the cost benefit tool or methodology.

Appendix A -- Cost Benefit Analysis Life Cycle



Appendix B -- Key Documents Produced from the Cost Benefit Analysis Methodology

Methodology Process	Key Documents Produced	Primary Documentation Information and Usage
Cost Assessment	Initial Cost Assessment worksheet and Operational Cost Assessment worksheet	<ul style="list-style-type: none"> Identifies all costs anticipated during the course of the proposed project Estimates initial and operational costs and indicates confidence factor to account for uncertainties
	Cost Assumption documentation notes	<ul style="list-style-type: none"> Comments, or notes, attached to cells to document all assumptions upon which cost estimates are based
Benefit Assessment	Benefit Assessment worksheet	<ul style="list-style-type: none"> Identifies benefits that are anticipated as a result of project implementation Classifies each benefit into Service or Revenue enhancement benefits. Benefits are also identified as annual or one-time benefits.
	Benefit Assumption documentation notes	<ul style="list-style-type: none"> Comments, or notes, attached to cells to document all assumptions upon which benefit estimates are based
	Project proposal summary of benefits	<ul style="list-style-type: none"> Describes benefits in the Project Proposal
Risk Assessment	Risk Assessment worksheet	<ul style="list-style-type: none"> Identifies whether key risks exist for the project and whether the impact is great enough to classify the project as high risk
	Risk Assumption documentation notes	<ul style="list-style-type: none"> Comments, or notes, attached to cells to document all assumptions upon which risk assessments are based
	Project proposal risk / solutions summary	<ul style="list-style-type: none"> Describes risks in the project proposal and discusses a risk mitigation plan for each identified high risk
Executive Summary	Financial Summary worksheet	<ul style="list-style-type: none"> Consolidates total initial costs, total operational costs, total one-time benefits and total annual benefits to provide a summary of the cumulative costs and benefits the project will generate. Uses project costs and benefits to show when costs will be paid back through realization of benefits. Uses yearly net cost to show projected funding requirements impact. Includes sources of funding for the project. Details cost benefit authorizations Identifies payback year

Appendix C -- Project Proposal

The Project Proposal is developed to provide a description of the business needs, the project implementation strategy, and deliverables. It is also the means for requesting and obtaining authorization for project initiation, including funding. The document should contain such information as scope, objectives, and benefits. For projects which involve development of a portal application, a Project Proposal supplement labeled "Preliminary Project Proposal – Portal" must also be completed. The Project Proposal (below) requires the following information:

PROJECT PROPOSAL

Project Name:		Project Number:	
Sponsor:		Project Fiscal Year:	
Sponsor Signature:		Priority:	
Budget/Fiscal Signature:		Funding Source(s):	
Contact Name and Phone:		Project Phase:	
Agency:		Phase Start Date:	
Date Project Proposal Last Revised:		Fiscal Year Project Originated in ISP	
Length of Project (months):			

Current Status of Previously Approved Project and ORC (IT ABC) Approval Date: _____

Business Process/Functional Description:

Business Goal or Objective:

Technical Description:

Data Description:

Risk Assessment / Potential Problems / Solutions:

Enhanced Service Benefits Description:

Enhanced Financial Benefits Description:

Explanation of Critical Dates and/or Mandates:

Cost Benefit Analysis Attached (yes/no):
If not attached, explain reason:

Appendix C – Project Proposal (cont.)

	Project Proposal
HEADING	DESCRIPTION
Project Name	A brief name which describes this project
Project Number	Projects must be identified using a project identification number that will permanently identify the project and track the project from budgeting through implementation and into maintenance. No duplicate project numbers should be used. If the project uses resources identified in the resource plan or budget document, the same project number should be used.
Sponsor	The name of the person designated as sponsor of this project. This individual will have management responsibility and will be accountable to the MAC for the success of the project.
Project Fiscal Year	<ul style="list-style-type: none"> • The fiscal year in which this project is intended to begin or did begin (FYXX). • Year One projects are targeted to begin in the fiscal year that begins July 1st of the current calendar year. The budget for this year is already approved; and the MAC approved Year One projects as Year Two projects last year. Projects submitted as Year One projects that were not reviewed in the prior year's plan should be noted as such under the Fiscal Year Project Originated in ISP. • Year Two projects are targeted to begin in the fiscal year that will begin July 1st of the next calendar year. The budget for this year will be prepared by the administration during the fall of this calendar year and submitted to the legislature in January of the next calendar year. • Year Three projects are targeted to begin in the fiscal year that will begin July 1st two years from now. Projects in this year are usually very high level. No cost benefit analysis is required for these projects.
Sponsor Signature	The signature of the sponsor indicating endorsement of the contents of the Project Proposal and Cost Benefit Analysis documentation.
Priority	The priority indicates the importance of the project within the particular plan year . Priority should be indicated starting with "1" for most important. Rank projects numerically among large and small projects, with NO duplicate priority numbers. If only ten projects were undertaken, what ten projects would that be?
Budget / Fiscal Signature	The signature of the Budget or Fiscal officer within the agency. This signature indicates endorsement of the Project Proposal and the Cost Benefit Analysis. This endorsement specifically extends to the increased agency revenue and / or decreased cost benefits indicated as well as the certainty of all funding sources indicated.

Appendix C – Project Proposal (cont.)

Funding Sources	<p>There are several funding sources for new Information Technology Projects. One source or combinations of these sources should be indicated in the Project Proposal and the Cost Benefit document. Use the abbreviations for the various funding sources.</p> <ul style="list-style-type: none"> • STATE <ul style="list-style-type: none"> • Systems Development Fund (SDF) is a mechanism for funding large application development projects. State agencies must repay funds used from this fund. The payback time frame for SDF-A and SDF-H is normally not over five years. The Information Systems Council determines expenditure from this fund based on the recommendation of the Commissioner of F & A. SDF-A and SDF-H funding is generally available only for projects of \$100,000 or more. In addition, for planning purposes 10.0% should be applied to the cost of borrowing SDF-H funds. This cost should be shown as a separate item on the Operational Cost Assessment work sheet under the cost category "General Administrative Fee (SDF)". NOTE that a general administrative fee is <u>not</u> applied to funds borrowed from SDF-A. • Application Development (SDF-A): Systems Development Fund dollars are used for information systems application costs. • Hardware (SDF-H): Projected dollars are used to purchase equipment and non-application system software. • Equipment Replacement Fund (ERF): Projected dollars used to replace desktop hardware. A two percent (2%) administrative fee will be applied to the annual escrow payments. • State Improvement (SI) is a funding source / budget item that the agency requests in the next fiscal year. Both administration and legislative approval is required. This funding source is only appropriate for Year Two projects. • State Continuance (SC) indicates that the money for the system or technology already exists in the agency's base budget. • FEDERAL (F) dollars are funds the Federal government has approved or is expected to approve for specific projects. • OTHER (O) dollars can come from a variety of sources. NOTE that the Project Proposal and Cost Benefit Analysis documents should clearly identify the source of funds designated as "other." Reserve funds are one type of "other" funding source.
Contact Name and Phone	The individual who is familiar with this project and is designated to respond to inquiries for details about the project. The individual should be aware of both technical and managerial issues of the project such as schedule, status, functional requirements, and priority. This person is usually the project manager within the agency.
Agency	The department or agency name. The division/section name should also be identified, if appropriate.
Project Phase	The current phase of the project in the development life cycle, usually project Initiation / Planning (analysis), Design / Construction, or Implementation.
Date Project Proposal Last Revised	This date indicates when this version of the Project Proposal was prepared.
Phase Start Date	This date indicates when the current phase of the project started or will start.
Length of Project (months)	An estimate of the number of months in the entire project development life cycle for this project.
Fiscal Year Project Originated in ISP	This should be the fiscal year when the project proposal was first prepared as a part of the agency's Information Systems Plan. If a Year One project in the current planning cycle was not in the prior year's plan, this date should reflect that status.

Appendix C – Project Proposal (cont.)

Previously approved projects that are in progress or scheduled to begin in Year One must be included in Year One of the Information Systems Plan. The Project Proposal and Cost Benefit Analysis should also be updated to reflect any changes in the project since it was approved.

Current Status of Previously Approved Project and ORC (IT ABC) Approval Date:	This section is for providing the current status of a previously approved project that has been started. Also provide the date the project was previously approved (found in the IT-ABC disposition memo).
Business Process/Functional Description	<p>A general high-level description of the project should be provided in this section focusing on the business need to be met by this project. Technical considerations are described elsewhere. This section should discuss the agency programs and organizational units affected by the project as well as the process that will be improved, eliminated, or automated. The level of detail in this section will depend on the phase of the project.</p> <p>This section should describe any pre-determined service objective or business requirement or expectation that will NOT be achieved. During the process of determining user needs and requirements, agency management and users tend to formulate their own expectations and understanding of the scope of the proposed system. This section should help manage expectations by clearly describing those needs that are outside the scope of the project.</p> <p>Dependencies such as certain events or actions that are required in order for the project to proceed should be described in this section.</p> <p>The first paragraph under description is used as the basis for the project description in the statewide plan. The business problem should be clearly stated (<u>not the solution</u>) since this is the overview of the project.</p>
Business Goal or Objective	<p>From the agency's strategic plan, <u>the specific service goal or objective that this project will support should be stated</u>. It should be clear from this section and the Functional Description how this project will aid the agency in meeting the specific goal or objective.</p> <ul style="list-style-type: none"> •
Technical Description	The description in this section focuses on the technical means that will be employed to implement this project. The project's technical environment, related to hardware, software, and communications, should be addressed in this section.
Data Description	<p>A brief description of the data including the following:</p> <ul style="list-style-type: none"> • brief narrative description • description of data conversion anticipated • current status of data (paper or machine readable) • source of data • likelihood of data to be used outside of agency

Appendix C -- Project Proposal (cont.)

Risk Assessment / Potential Problems / Solutions	<p>The Risk Assessment portion of the cost benefit analysis should be summarized here. Discuss the high risk factors of the project. Be precise in your evaluation of these risks, and include a discussion of possible strategies that could reduce the risks. The project sponsor and the agency MAC should be very aware of potential problems and risks since it is their responsibility to ensure that action is taken to mitigate those risks.</p> <p>Some types of risks that could be anticipated include:</p> <ul style="list-style-type: none"> • Shortage of critical resources (such as data base analysts) available to work on a project of this nature. • Very strong dependencies with other project work that may currently be behind schedule. The operation of those other projects may adversely affect the ability to perform this project. • Impending organizational changes, management or personnel changes involving the project team, review groups, sponsor, or MAC that can substantially impact the ability to develop the project. • Substantial impacts imposed during operation upon the user organization (such as retraining all clerical personnel), or the implementation of an on-line system with infrastructure difficulties, or a myriad of other anticipated activities that could cause problems.
Enhanced Service Benefits Description	<p>The Enhanced Service Benefits portion of the Benefit Assessment worksheet of the cost benefit analysis should be summarized here. Specifically list the service benefits to be achieved. Include the Benefit Number from the cost benefit analysis documentation so that a cross-reference can be made.</p>
Enhanced Financial Benefits Description	<p>The Enhanced Financial Benefits portion of the Benefit Assessment worksheet of the cost benefit analysis should be summarized here. Specifically list the financial benefits to be achieved and include total dollar amounts to be recovered from any increased agency revenue or decreased cost benefits. Be sure and include the Benefit Number from the cost benefit analysis documentation so that reference can be made.</p>
Explanation of Critical Dates and / or Mandates	<p>Events that are vital to the success of the project are described here, along with their dates. If the project is mandated by legislative action, indicate that here along with a description of the mandate and its source.</p>
Cost Benefit Analysis Attached	<p>Indicate yes if a cost benefit analysis document is attached and no if one is not attached. All projects in Year One or Year Two over \$100,000 require a cost benefit analysis (as well as a project proposal). If a cost benefit is required and is not attached, please explain.</p>

Appendix D -- Initial Cost Assessment

	A	B	C	D	E	N	O	P	Y	Z	AA	AJ
	Cost Category	Description	Cost Center/ Funding Source	Initiation / Planning	Initiation / Planning	Existing Cost (yes/no)	Design / Construction	Design / Construction	Existing Cost (yes/no)	Implementation	Implementation	Existing Cost (yes/no)
1				2005	2006		2005	2006		2005	2006	
2												
3	Confidence Factor:	0.80										
4												
5	Personnel											
6	Project Management					no			no			no
7	Planning, Analysis, Design, Construction					no			no			no
8	Test Management					no			no			no
9	Infrastructure: Project Mgmt, LAN/WAN, Systems					no			no			no
10	Data Resource Management					no			no			no
11	Business unit staff					no			no			no
12	Other					no			no			no
13												
14	Software											
15	Purchase of application software					no			no			no
16	Purchase of system software					no			no			no
17	Purchase of Data Base Software					no			no			no
18												
19	Hardware											
20	Desktops					no			no			no
21	Notebooks, Tablets, Handhelds					no			no			no
22	Servers					no			no			no
23	Printers					no			no			no
24	Peripherals either for new work stations or to attach to existing work stations					no			no			no
25												
26	Hardware Installation											
27	Desktop					no			no			no
28	Server					no			no			no
29												
30	Security											
31	Hardware & Software					no			no			no
32	Services Planning					no			no			no
33												
34	Communications											
35	Cabling					no			no			no
36												
37	Data Conversion					no			no			no
38												
39	Documentation					no			no			no
40												
41	Training											
42	IS staff or Contractors					no			no			no
43	Business Unit staff					no			no			no
44												

Appendix D -- Initial Cost Assessment (cont.)

	A	B	C	D	E	N	O	P	Y	Z	AA	AJ
45	Facilities											
46	Additional Space					no			no			no
47	Work area					no			no			no
48	Furniture					no			no			no
49	Ergonomic Studies					no			no			no
50	Renovation of existing space					no			no			no
51												
52		Grand Total All Years		Initiation / Planning	Initiation / Planning		Design / Construction	Design / Construction		Implementation	Implementation	
53				2005	2006		2005	2006		2005	2006	
54	Without Confidence Factor Applied:											
55	Total Initial Cost (Including New and Existing Dollars)	0		0	0		0	0		0	0	
56	Total Initial New Dollar Costs	0		0	0		0	0		0	0	
57	With Confidence Factor Applied:											
58	Total Initial Cost (Including New and Existing Dollars)	0		0	0		0	0		0	0	
59	Total Initial New Dollar Costs	0		0	0		0	0		0	0	

Appendix D -- Initial Cost Assessment (cont.)

INITIAL COST ASSESSMENT	
HEADING	DESCRIPTION
Cost Category	<p>A list of various categories of cost such as personnel, software, hardware, networking, data conversion. Individual cost items should be added as new rows under the relevant cost category. It is critical that all cost items are included and explanations of assumptions and calculations are attached.</p> <p>DO NOT DELETE any categories or cost items from the CBA template. DO NOT DELETE any columns from the CBA template. HIDE any columns not needed.</p> <p>Under Personnel, identify the breakout for each function according to Agency vs. OIR vs. Consulting resource requirements, and whether a manager is to be assigned for the function: i.e. will there be a Project Manager (from OIR; from the Agency), a Test Manager, etc. Rows may be added as necessary to provide this breakout. Note that any OIR-provided Test Manager will be charged at the rate of \$62 per hour as provided in the Guidelines in Chapter 2, page 13.</p>
Description	<p>Descriptions of cost estimates should include the assumptions used in arriving at the estimates as well as the source of the cost information. Descriptions may be either in this column or in notes attached to the cell in which the estimate is entered.</p> <p>There are two ways to describe costs depending on whether or not you need to see the description on the same page as the estimate, or if descriptions on the next page are acceptable.</p> <ul style="list-style-type: none"> Attaching notes to cells will cause the description to print on the page following the worksheet. Descriptions in this column will put the explanation on the same page as the estimate. <p>Our recommendation is that the description be in notes attached to the cell in which the estimate is placed. Be sure and have the Row and Column box checked in the Page Setup: Sheet dialogue box, so that reference from each note to the appropriate cell can be made.</p>
Agency Cost Center/Funding Source	Some agencies may wish to indicate charge back detail here: cost centers and/or object codes.
Project Initiation / Planning Phase	Initial costs incurred during the analysis phase of the project. These costs should be designated in the year in which they are incurred. Year one and two of the project show on the worksheet, but years three through ten are hidden columns. Only the years used should be shown. Consider hiding any unused years so that, if the project timeframe changes, those columns can be unhidden and used.
Design / Construction Phase	Same as project Initiation / Planning (analysis) phase instructions
Implementation Phase	Same as project Initiation / Planning (analysis) phase instructions
Existing Cost	<ul style="list-style-type: none"> New costs are costs incurred by the agency if the project is undertaken. Examples of new costs include new personnel resources (new hires or contractors), hardware, software, communications, training, etc. Existing Costs are costs incurred by the agency independent of whether the project is undertaken. Examples of existing costs would include current agency personnel, current software licenses or node connections, etc. The default is "no," which answers the question "Is this an existing cost?" If a cost item is an existing cost, change "no" to "yes."

Appendix D -- Initial Cost Assessment (cont.)

Confidence Factor	<p>Indicate in cell B3 the percentage of confidence held in the accuracy and completeness of the initial cost estimates. Factors that determine the confidence factor include the risk level, the phase, and the type of project. The higher the confidence factor, the more confident the project manager is of the degree of accuracy of the estimates.</p> <p>Confidence factors are incorporated into initial cost estimates by applying a multiplier to each cost calculation. The multiplier is 1 plus the difference in the confidence factor and 100%.</p> <p>For example, a confidence factor of 85% (0.85) will result in a multiplier of 1.15. This multiplier is then applied to initial cost calculations. A total initial cost column for a year that is \$120,000 would become \$138,000 when this multiplier is applied.</p> <p>Possible confidence factors might be as follows:</p> <ul style="list-style-type: none"> • Project Initiation / Planning (analysis) - 60% • Design / Construction - 80% to 90% • Implementation - 90% to 100% <p>One confidence factor is applied to the grand totals at the bottom of the spreadsheet. The default is 80% confidence factor. NOTE that if you use individual confidence factors on the various initial cost line items, then the overall confidence factor entered into cell B3 should be 1.0 since this factor is applied to each year's totals. Note that the overall confidence factor is <u>not</u> applied to any figures for Project years which have Actual costs rather than projected costs. Cell B29 of the Financial Summary sheet is where the "Actual Costs" year is designated.</p>
Without Confidence Factor Applied	The two rows of initial costs under this label are totals <u>without</u> the confidence factor applied.
Total Initial Cost (Including New and Existing)	Total initial cost and initial costs itemized by development phase. All of these costs are totaled for all years and are also indicated in the projected fiscal year of expenditure. A single number representing the total initial cost for the project should be included under the Grand Total column.
Total Initial New Dollar Costs	Total initial costs minus the existing costs in the same format as above. A single number representing the total new dollar initial cost for the project should be included under the Grand Total column.
With Confidence Factor Applied	The two rows of initial costs under this label are totals <u>with</u> the confidence factor applied.
Total Initial Cost (Including New and Existing)	Total initial cost by year, itemized by development phase. All of these costs are totaled for each year and are also indicated in the projected fiscal year of expenditure. A single number representing the total initial cost for the project should be included under the Grand Total column.
Total Initial New Dollar Costs	Total initial costs minus the existing costs in the same format as above. A single number representing the total new dollar initial cost for the project should be included under the Grand Total column.

Spreadsheet Formulas:

Initial Costs formulas automatically summarize all totals and apply the confidence factor to the totals. Each of the three development phases has 10 years that are built into the summarizations and linked to the Financial Summary.

1. The confidence factor in decimal form should be keyed into cell B3. This cell is named Confidence_Factor and this name is referenced in the totals. This assumes that you will be using only one confidence factor in your initial costs. If you have need for multiple confidence factors in your initial costs, then leave the overall confidence factor set to 1.0 and incorporate the various confidence factors into the individual calculations.
2. The formulas which calculate the "Total Initial New Dollar Costs" do a check for the "no" in the "Existing Cost" columns. Where "no" is indicated, the cost to its left will be treated as a new cost and will be included in the row for "Total Initial New Dollar Costs". NOTE that the "no" applies to each year to the left during the applicable phase.
3. Fiscal Years for each of the three phases have total formulas and are linked and summarized to the Financial Summary. Hide any columns that are not needed; do not delete any of these columns.

Appendix E -- Operational Cost Assessment

	A	B	C	D	E	F	G	H	I	J	K	L	M
			Cost Center/ Funding Source		Existing Costs (yes/no)		Existing Costs (yes/no)		Existing Costs (yes/no)		Existing Costs (yes/no)		Existing Costs (yes/no)
1	Cost Category	Description		2005		2006		2007		2008		2009	
2	Personnel												
3	Project Management				no		no		no		no		no
4	Infrastructure: Project Mgmt, LAN/WAN, Systems				no		no		no		no		no
5	Data Resource Management				no		no		no		no		no
6	Other				no		no		no		no		no
7													
8	Software				no		no		no		no		no
9	Application Software Lease or License Fees				no		no		no		no		no
10	Application Software Maintenance or Upgrades				no		no		no		no		no
11	DBMS Software Lease or License Fees				no		no		no		no		no
12	DBMS Software Maintenance or Upgrades				no		no		no		no		no
13	System Software Lease or License Fees				no		no		no		no		no
14	Systems Software Maintenance or Upgrades				no		no		no		no		no
15													
16	Training and Travel												
17	IS staff or Contractors				no		no		no		no		no
18	Business Unit Staff				no		no		no		no		no
19	Consulting Staff				no		no		no		no		no
20													
21	On-going Operations												
22	Telecommunications & Network Services				no		no		no		no		no
23	OIR Shared or Co-located Server Costs				no		no		no		no		no
24	Data Conversion				no		no		no		no		no
25	Contracted Services				no		no		no		no		no
26	Equipment Maintenance				no		no		no		no		no
27	Equipment Replacement				no		no		no		no		no
28	Equipment Rental/Lease				no		no		no		no		no
29	Equipment Electricity				no		no		no		no		no
30	Equipment Climate Control				no		no		no		no		no
31	Security Equipment, Software, or Services				no		no		no		no		no
32	Peripheral Equipment				no		no		no		no		no
33	Telephone Services				no		no		no		no		no
34	Supplies				no		no		no		no		no
35	Mail, Postage, Printing				no		no		no		no		no
36	Other				no		no		no		no		no
37													

Appendix E -- Operational Cost Assessment (cont.)

	A	B	C	D	E	F	G	H	I	J	K	L	M
38	Portal costs												
39	Transaction Fees				no		no		no		no		no
40	Payment Fees [see Note 1]				no		no		no		no		no
41													
42	General Administrative Fee (SDF)				no		no		no		no		no
43													
44				Operational Costs		Operational Costs		Operational Costs		Operational Costs		Operational Costs	
45		Grand Total All Years		2005		2006		2007		2008		2009	
46	Total Operational Costs	0		0		0		0		0		0	
47	Total New Dollar Operational Costs	0		0		0		0		0		0	

Appendix E -- Operational Cost Assessment (cont.)

	A	B	N	O	P	Q	R	S	T	U	V	W
				Existing Costs (yes/no)		Existing Costs (yes/no)		Existing Costs (yes/no)		Existing Costs (yes/no)		Existing Costs (yes/no)
1	Cost Category	Description	2010		2011		2012		2013		2014	
2	Personnel											
3	Project Management			no		no		no		no		no
4	Infrastructure: Project Mgmt, LAN/WAN, Systems			no		no		no		no		no
5	Data Resource Management			no		no		no		no		no
6	Other			no		no		no		no		no
7												
8	Software			no		no		no		no		no
9	Application Software Lease or License Fees			no		no		no		no		no
10	Application Software Maintenance or Upgrades			no		no		no		no		no
11	DBMS Software Lease or License Fees			no		no		no		no		no
12	DBMS Software Maintenance or Upgrades			no		no		no		no		no
13	System Software Lease or License Fees			no		no		no		no		no
14	Systems Software Maintenance or Upgrades			no		no		no		no		no
15												
16	Training and Travel											
17	IS staff or Contractors			no		no		no		no		no
18	Business Unit Staff			no		no		no		no		no
19	Consulting Staff			no		no		no		no		no
20												
21	On-going Operations											
22	Telecommunications & Network Services			no		no		no		no		no
23	OIR Shared or Co-located Server Costs			no		no		no		no		no
24	Data Conversion			no		no		no		no		no
25	Contracted Services			no		no		no		no		no
26	Equipment Maintenance			no		no		no		no		no
27	Equipment Replacement			no		no		no		no		no
28	Equipment Rental/Lease			no		no		no		no		no
29	Equipment Electricity			no		no		no		no		no
30	Equipment Climate Control			no		no		no		no		no
31	Security Equipment, Software, or Services			no		no		no		no		no
32	Peripheral Equipment			no		no		no		no		no
33	Telephone Services			no		no		no		no		no
34	Supplies			no		no		no		no		no
35	Mail, Postage, Printing			no		no		no		no		no
36	Other			no		no		no		no		no
37												

Appendix E -- Operational Cost Assessment (cont.)

	A	B	N	O	P	Q	R	S	T	U	V	W
38	Portal costs											
39	Transaction Fees			no		no		no		no		no
40	Payment Fees [see Note 1]			no		no		no		no		no
41												
42	General Administrative Fee (SDF)			no		no		no		no		no
43												
44			Operational Costs		Operational Costs		Operational Costs		Operational Costs		Operational Costs	
45		Grand Total All Years	2010		2011		2012		2013		2014	
46	Total Operational Costs	0	0		0		0		0		0	
47	Total New Dollar Operational Costs	0	0		0		0		0		0	

Appendix E -- Operational Cost Assessment (cont.)

OPERATIONAL COST ASSESSMENT	
HEADING	DESCRIPTION
Cost Category	<p>A list of various categories of cost such as maintenance, lease, interest, and communication. Individual cost items should be added as new rows under the relevant cost category. It is critical that all cost items are included and explanations of assumptions and calculations are attached.</p> <p>DO NOT DELETE any categories or cost items from the CBA template. DO NOT DELETE any columns from the CBA template. HIDE any columns not needed.</p> <p>SDF Note: If SDF-H funding is requested from the Systems Development Fund, the cost category "General Administrative Fee (SDF)" should show 10.0% of the amount paid back for each year of payback. This amount, estimated for planning purposes, includes general administrative and technology expenses and interest. Generally, payback begins when the system becomes operational and is usually dispersed over a five-year period.</p> <p>For example, to pay back \$1,000,000 over five years beginning in year three, the agency would pay back \$200,000 per year for five years. The cost of borrowing the money would be shown as \$20,000 per year for years three through seven. While principal pay back is required, that amount is not reflected as a separate cost category since the amount is already recorded as the initial cost of the system. Under Personnel, identify the breakout for each function according to Agency vs. OIR vs. Consulting resource requirements, and whether a manager is to be assigned for the function: i.e. will there be a Project Manager (from OIR; from the Agency), etc. Rows may be added as necessary to provide this breakout.</p>
Description	<p>Descriptions of cost estimates should include the assumptions used in arriving at the estimates as well as the source of the cost information. Descriptions may be either in this column or in notes attached to the cell in which the estimate is entered.</p> <p>There are two ways to describe costs depending on whether or not you need to see the descriptions on the same page as the estimate, or if descriptions on the next page are acceptable.</p> <ul style="list-style-type: none"> • Attaching notes to cells will cause the documentation to print on the page following the worksheet. • Descriptions in this column will put the explanation on the same page as the estimate. <p>Our recommendation is that the descriptions be in notes attached to the cell in which the estimate is placed. Be sure and have the Row and Column box checked in the Page Setup: Sheet dialogue box, so that reference from note to the appropriate cell can be made.</p>
Agency Cost Center/Funding Source	Some agencies may wish to indicate charge back detail here.
Operational Costs	Operational costs are costs incurred after implementation of the project. These costs may be the same for all years of system life or they may change as the system ages for various reasons. A separate column is provided for each of the ten years. Hide the columns for the years that are not needed.

Appendix E -- Operational Cost Assessment (cont.)

Existing Costs	<ul style="list-style-type: none">• New costs are costs incurred by the agency if the project is undertaken. Examples of new costs include new personnel resources (new hires or contractors), hardware, software, communications, training, etc.• Existing Costs are costs incurred by the agency independent of whether the project is undertaken. Examples of existing costs would include current agency personnel, software licenses or node connections, etc.• The default is “no,” which answers the question “Is this an existing cost?” If a cost item is an existing cost change “no” to “yes.”• NOTE that each of the 10 years has an “existing cost” column. Be sure that any cost appearing in any of the 10 years has the appropriate “existing cost” indicator entered.
Total Operational Costs (Including New and Existing Dollars) and Total New Dollar Operational Costs	Total operational costs and new dollar costs by year categories.

Spreadsheet Formulas:

1. The formulas which calculate the “Total New Dollar Operational Costs” do a check for the “no” in the “Existing Cost” columns. Where “no” is indicated, the cost to its left will be treated as a new cost and will be included in the row for “Total New Dollar Operational Costs”.
2. Fiscal Years have total formulas and are linked and summarized to the Financial Summary. DO NOT DELETE ANY COLUMNS, HIDE columns not needed.

Appendix F -- Benefit Assessment

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1						Dollars (for increased agency revenue or decreased costs only)								
2	Category	Benefit Number	Benefit Description	Confidence Factor	Benefit Type	2005	2006	2007	2008	2009	2010	2011	2012	2013
3														
4	Enhanced Service Benefits													
5														
6	Enhanced Financial Benefits				R-A, R-O, D-A,	<u>R-A: increased revenue-annual</u>					<u>D-A: decreased costs-annual</u>			
7	Soft Dollar:					<u>R-O: increased revenue-one time</u>					<u>D-O: decreased costs-one time</u>			
8	Increased State Revenue				XXXX									
9	Cost Redirection				XXXX									
10	Cost Avoidance				XXXX									
11	Total Soft Dollar Benefits:		0			0	0	0	0	0	0	0	0	0
12	Hard Dollar:													
13	Increased Agency Revenue				XXXX									
14	Increased Agency Revenue				XXXX									
15	Decreased Costs				XXXX									
16	Decreased Costs				XXXX									
17														
18	Hard Dollar Totals:		Total All Years			2005	2006	2007	2008	2009	2010	2011	2012	2013
19	Increased Agency Revenue - One time		0			0	0	0	0	0	0	0	0	0
20	Increased Agency Revenue - Annual		0			0	0	0	0	0	0	0	0	0
21	Decreased Costs - One time		0			0	0	0	0	0	0	0	0	0
22	Decreased Costs - Annual		0			0	0	0	0	0	0	0	0	0
23														
24				Confidence Factor should be applied to each line item. This is not automatically calculated in the provided formulas.										

Appendix F -- Benefit Assessment (cont.)

	Benefit Assessment
HEADING	DESCRIPTION
Category	<p>Benefits are divided into two general categories: enhanced service benefits and enhanced financial benefits. The enhanced financial benefit is further divided into five subcategories - increased agency revenue, decreased costs, increased State revenue, cost redirection, and cost avoidance. Listed below are some examples of each:</p> <p>Enhanced Service Benefits:</p> <ul style="list-style-type: none"> • Increases service to the public • Reduces response time • Makes available needed information • Reduces errors (increases accuracy) • Implements government policies • Enables faster decision making • Provides better accountability and audit trails • Increases management capabilities • Improves analysis of trends • Provides early warning and project status <p>Enhanced Financial Benefits:</p> <ul style="list-style-type: none"> • Increased Agency Revenue <ul style="list-style-type: none"> • Produces additional revenue through increases in charges / fees or additional fees collected through enhanced collection efforts that can be used to offset the cost of the project • Expands grants through project implementation • Decreased Costs <ul style="list-style-type: none"> • Reduces internal or external labor costs • Reduces usage of materials / supplies • Reduces work space • Reduces or eliminates internal or external computer processing • Reduces training • Reduces maintenance • Reduces current system hardware, maintenance, support costs • Increased State Revenue <ul style="list-style-type: none"> • Produces additional State revenue that can not be used by the agency to offset the cost of the project • Cost Redirection <ul style="list-style-type: none"> • Increases work or resource efficiency • Increases information accuracy • Cost Avoidance <ul style="list-style-type: none"> • Reduces internal or external labor cost expansion • Reduces expansion of the usage of materials / supplies • Reduces work space expansion • Reduces computer processing expansion <p>DO NOT DELETE any columns from the CBA template. HIDE any columns not needed.</p>
Definition	A brief definition of the benefit category.
Benefit Number	Each individual benefit should be given a number that can be used in the Project Proposal to refer back to the Benefit Assessment worksheet.

Appendix F -- Benefit Assessment (cont.)

Benefit	The description of the individual benefit identified should be as specific as possible so that agency and non-agency personnel can easily understand the benefit. If this benefit is associated with increased agency revenue or decreased cost, be sure to document the underlying assumptions and specifics on cost recovery.
Soft Dollar Benefits	Soft dollar benefits can be listed for Increased State Revenue, Cost Redirection, or Cost Avoidance. Provide the benefit number and description in the appropriate cells. Enter the annual amount of each benefit in their corresponding Fiscal Year in the shaded area. NOTE: Do <u>NOT</u> indicate a benefit type for soft dollar benefits; leave the XXXX column as is. Additional rows can be added between row 7 and 11 if needed. The total of all soft dollar benefits is automatically calculated on the line shown and automatically transferred to the Financial Summary worksheet.
Hard Dollar Benefits (for increased agency revenue or decreased costs only)	<ul style="list-style-type: none"> While any of the above categories or subcategories may generate support for a project, only the Increased Agency Revenue or Decreased Costs subcategories will have hard dollar benefits detailed to be used to mitigate the cost of the project. Benefit Type: Enter the appropriate code for benefits that generate dollars to offset costs. Valid codes and meanings are as follows: <ul style="list-style-type: none"> R-A: increased agency revenue-annual; the dollar value for a benefit that is realized annually R-O: increased agency revenue-one time; the dollar value for a benefit that is realized once D-A: decreased costs-annual; the dollar value for a benefit that is realized annually D-O: decreased costs-one time; the dollar value for a benefit that is realized once Confidence Factor: Confidence factors are incorporated into benefit estimates by applying a multiplier to each benefit calculation. The multiplier is equal to the decimal value of the confidence factor. <ul style="list-style-type: none"> For example, a confidence factor of 90% will result in a multiplier of 0.90. This multiplier is then applied to the benefit calculation. A benefit estimated at \$10,000 would become \$9,000 when this multiplier is applied. When calculating the benefit dollar value, be sure to apply the confidence factor to each corresponding benefit. NOTE that the spreadsheet <u>does not</u> automatically apply confidence factors to calculations; you must apply the factor to each item in each year that it applies. Attach a note explaining why a specific confidence factor was used.
Totals	Total of all benefits from increased agency revenue or decreased costs for one time and annual benefits.

Spreadsheet Formulas:

The Benefit Assessment has columns for each of the 10 years.

1. Insert the correct annual or one-time revenues or decreased costs into the appropriate fiscal year (s). The confidence factor should be applied to each amount. No formulas are provided to automatically calculate the benefit with the confidence factor.
2. Annual and total soft dollar benefits are calculated on the line shown, as well as automatically transferred to the Financial Summary worksheet.
3. Codes are used to identify which of the four types of hard dollar benefits you have identified. These benefit codes are used in calculating the summary totals at the bottom of the sheet. Based on the code entered for each individual hard dollar benefit, the four totals are updated at the bottom of the spreadsheet. The total of all these hard dollar benefits is also automatically transferred to the Financial Summary worksheet

Appendix G -- Risk Assessment

Risk Factor	High Risk	Normal Risk	High	Normal	NA
Mainline impact	Major impact on organization's main business objective and goals	Minimal impact on organization's main business objective and goals			
Commitment by management	Senior management not actively involved	Management is committed to project			
Project Length	Over 1 year	1 year or less			
Project team Size	Over 10 people	10 people or less			
Project team experience	Project team staffed with inexperienced personnel or does not have appropriate functional and/or technical skills	Project team staffed with experienced personnel with appropriate functional and technical skills			
Percentage of time key project members dedicated to the project	Less than 50%	More than 50%			
Project Manager experience	No prior experience in this type project	Experience in this type project			
Number of outside organizations or agencies to coordinate	2 or more	Less than 2			
User participation	Minimum user participation	User personnel actively participating in project			
User support	Users/sponsors are not committed to project	Strong user sponsorship			
User impact	Significant impact on user daily operations	Minimal impact on user daily operations			
Cost benefit analysis	Approximations used are not based on proven practice standards (estimating guidelines)	Costs from quotes and proven practice standards (estimating guidelines)			
Existence of a clear business plan	No	Yes, and used for project planning			
Scheduled completion	Inflexible completion dates (absolute deadline) with little delay tolerance because other development depends on completion	Completion dates are set but no other development or processing depends on the completion			
Hardware / Software	Vendor or specific equipment or software does not have proven record or performance	Vendor and/or specific equipment or software has proven performance			
System complexity	Pioneering, new hardware/software, extensive software modifications	No significant unique or new considerations, minor software modifications			
Project size	More than 1,000 workdays	Less than 1,000 workdays			
Quality of data to convert	Complex data base conversion requirements or questionable data integrity	Data conversion is straight forward			
Required Level of Security	High security level required for data: storage, transmission, access	No significant security requirements beyond basic network security.			

Appendix G -- Risk Assessment (cont.)

	Risk Assessment
HEADING	DESCRIPTION
Risk Factor	A list of risk factors is provided for review and assessment. There may be additional risks involved that are not on the list. They should be added.
High Risk	Descriptions here define high risk for this particular risk factor.
Normal Risk	Descriptions here define normal risk for this particular risk factor.
High	Indicate with an X if the high-risk definition is most appropriate for this project. If one or more factors are determined to be high risk, the entire project is deemed a high-risk project. For each high risk factor, a description of the risk and the plan to mitigate the risk should be included in the appropriate section of the Project Proposal. The extent of risk in a project should impact the cost confidence factors.
Normal	Indicate with an X if the normal risk definition is most appropriate for this project.
Not Applicable (NA)	Indicate with an X if this risk factor is not applicable for this project.

Appendix H -- Financial Summary

	A	B	C	D	E	F	G	H	I	J	K	L
1	Project Name:				Project Number:				Project Phase:			
2												
3												
4	Agency:				Date Last Revised:				Year 1 of Project (Fiscal Yr):			
5											2005	
6												
7	Executive Summary											
8												
9	Cost/Benefit Summary	Total New Dollars for All Years		Total New & Existing Dollars for All Years		Initial Cost Confidence Factor						
10	Initial Cost:	0		0		0.80						
11	Operational Costs:	0		0								
12	Hard Dollar Benefits:	0		0								
13	Net Cost (costs minus benefits):	0		0								
14	Year of Payback:	0										
15												
16	Funding Summary	Total All Years (New)		Total All Years (New & Existing)				SDF Principal Payback			Total All Years	
17	(SDF-A) Application Development	0		0				Total SDF Funds Borrowed:			0	
18	(SDF-H) Hardware	0		0				SDF Payback Funding Sources:				
19	(ERF) Equipment Replacement Fund	0		0				(SI) State Improvement--One Time			0	
20	(SI) State Improvement--One Time	0		0				(SI) State Improvement--Recurring			0	
21	(SI) State Improvement--Recurring	0		0				(SC) State Continuance			0	
22	(SC) State Continuance	0		0				(F) Federal			0	
23	(F) Federal	0		0				(O) Other			0	
24	(O) Other	0		0				(O) Other			0	
25	(O) Other	0						Total SDF Payback Funding:			0	
26	Total Funding:	0		0				Unfunded SDF Payback:			0	
27	(Overfunded) Unfunded Cost:	0		0								
28												
29	Cost Figures are Actual thru FY:	2004										
30	Total Initial Dollars spent through 3/31/04	0		0								
31	Total Initial Dollars projected to be spent from 3/31/04 through 6/30/04											
32	Total Initial Dollars yet to be spent:	0		0								
33												
34	CBA Approval Dates			Last Approved by Sponsor:								
35				Last Approved by Agency Budget / Fiscal Office:								
36				Last Approved by MAC:								
37												

Appendix H -- Financial Summary (cont.)

	A	B	C	D	E	F	G	H	I	J	K	L
38	Total Project Cost (Including New and Existing Dollars)	Total all Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
39	Total Initial Costs	0	0	0	0	0	0	0	0	0	0	0
40	Initiation / Planning (Analysis)	0	0	0	0	0	0	0	0	0	0	0
41	Design / Construction	0	0	0	0	0	0	0	0	0	0	0
42	Implementation	0	0	0	0	0	0	0	0	0	0	0
43	Total Operational Costs	0	0	0	0	0	0	0	0	0	0	0
44												
45	New Dollar Costs Only	Total all Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
46	Total Initial Costs	0	0	0	0	0	0	0	0	0	0	0
47	Initiation / Planning (Analysis)	0	0	0	0	0	0	0	0	0	0	0
48	Design / Construction	0	0	0	0	0	0	0	0	0	0	0
49	Implementation	0	0	0	0	0	0	0	0	0	0	0
50	Total Operational Costs	0	0	0	0	0	0	0	0	0	0	0
51												
52	Financial Benefit Summary	Total all Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
53	Increased Revenue - One Time	0	0	0	0	0	0	0	0	0	0	0
54	Increased Revenue - Annual	0	0	0	0	0	0	0	0	0	0	0
55	Decreased Cost - One Time	0	0	0	0	0	0	0	0	0	0	0
56	Decreased Cost - Annual	0	0	0	0	0	0	0	0	0	0	0
57	Total Benefits	0	0	0	0	0	0	0	0	0	0	0
58												
59	Cumulative New Cost / Benefit Calculation		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
60	Cumulative Initial Costs		0	0	0	0	0	0	0	0	0	0
61	Cumulative Operational Costs		0	0	0	0	0	0	0	0	0	0
62	Cumulative Benefits		0	0	0	0	0	0	0	0	0	0
63	Cumulative cost minus benefits		0	0	0	0	0	0	0	0	0	0
64												
65												
66	Year of Payback											
67												
68												
69												
70	Soft Dollar Financial Benefits	Total all Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
71		0	0	0	0	0	0	0	0	0	0	0
72												

Appendix H -- Financial Summary (cont.)

	A	B	C	D	E	F	G	H	I	J	K	L
		Total All Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
73	Funding By Fiscal Year											
74	Net New Costs to be Funded:	0	0	0	0	0	0	0	0	0	0	0
75	Funding Sources:											
76	(SDF-A) Application Development	0										
77	(SDF-H) Hardware	0										
78	(ERF) Equipment Replacement Fund	0										
79	(SI) State Improvement--One Time	0										
80	(SI) State Improvement--Recurring	0										
81	(SC) State Continuance	0										
82	(F) Federal -- Specify with comment	0										
83	(O) Other -- Specify with comment	0										
84	(O) Other -- Specify with comment	0										
85	Total New Funding:	0	0	0	0	0	0	0	0	0	0	0
86	Cumulative (Overfunded) Unfunded Cost:	0	0	0	0	0	0	0	0	0	0	0
87												
88	Funding of Existing Costs:	0	0	0	0	0	0	0	0	0	0	0
89	(SC) State Continuance	0										
90	(F) Federal -- Specify with comment	0										
91	(O) Other -- Specify with comment	0										
92	Total Existing Funding:	0	0	0	0	0	0	0	0	0	0	0
93	Funding not specified:	0	0	0	0	0	0	0	0	0	0	0
94												
95	SDF Payback by Fiscal Year	Total All Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
96	SDF-A Funds Borrowed	0	0	0	0	0	0	0	0	0	0	0
97	SDF-H Funds Borrowed	0	0	0	0	0	0	0	0	0	0	0
98	ERF Funds Borrowed	0	0	0	0	0	0	0	0	0	0	0
99	Total SDF Funds Borrowed:	0	0	0	0	0	0	0	0	0	0	0
100												
101	SDF Principal Payback Funding Sources:	Total All Years	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
102	(SI) State Improvement--One Time	0										
103	(SI) State Improvement--Recurring	0										
104	(SC) State Continuance	0										
105	(F) Federal -- Specify with comment	0										
106	(O) Other -- Specify with comment	0										
107	(O) Other -- Specify with comment	0										
108	Total Principal Payback Funding:	0	0	0	0	0	0	0	0	0	0	0
109	Unfunded SDF Principal Payback:	0										
110												
111	Funding and SDF Payback Comments:											
112												
113												
114												
115												

Appendix H -- Financial Summary (cont.)

NOTE: Only the shaded cells in the Financial Summary must have information entered; the values in all other cells are calculated. Use the tab key to jump to the next required data field.

HEADING	DESCRIPTION
Project Name	Enter the project name as shown on the corresponding Project Proposal.
Project Number	Enter the project number as shown on the corresponding Project Proposal.
Project Phase	Enter the current phase of the project in the development life cycle: <ul style="list-style-type: none"> • Initiation / Planning (analysis) • Design and Construction • Implementation
Agency	Enter the department or agency name. The division/section name may also be identified, if appropriate.
Date Last Revised	Enter the date when this version of the cost benefit analysis was prepared.
Year 1 of Project (Fiscal Year)	Enter the fiscal year the project will begin. For a Year 1 Project (beginning in 2004/2005) in the 2004-2005 Plan, the fiscal year would be 2005, which is the current value of the field. (The fiscal year refers to the second year of the budget year; so- 2003/2004 is FY 2004). This field sets the headers for the ten years of costs.
Cost Figures are Actual Thru FY:	Enter the last year for which Actual Initial Costs have been supplied. Where "Year 1 of Project" is 2002, for example, and years 2002 and 2003 represent actual cost data, enter "2003". This will prevent the Confidence Factor calculation from being applied to actual costs entered for 2002 and 2003.
Initial Cost	A reference to the Total Initial Cost for all years from the New Dollar Costs and Total Project Cost (New and Existing) portions (Page 2) of this worksheet.
Operational Costs	A reference to the Total Operational Cost for all years from the New Dollar Costs and Total Project Cost (New and Existing) (Page 2) portions of this worksheet.
Hard Dollar Benefits	A reference to the Total Benefits for all years from the Financial Benefit Summary portion of this worksheet.
Net Cost (cost minus benefits)	The difference in the 10-year total benefits and the 10-year sum of the total initial and operational costs.
Year of Payback	A reference to the Year of Payback portion of this worksheet. This is the year at which cumulative benefits exceed new cumulative costs (Page 2).
Total Funding	A reference to the total 10-year funding sources identified on page 3 of the summary.
Cumulative (Overfunded) Unfunded Cost	The net cost minus all of the funding sources for initial and operational costs. This total should not be positive (i.e. unfunded).
Total Initial Dollars spent through 3/31/04	Enter the total amount of the initial cost expended on the project through the end of the third quarter of this fiscal year. Both Total New Dollars and Total New & Existing dollars are addressed.
Total Initial Dollars projected to be spent through 6/30/04	Enter the total amount of the initial cost projected to be spent on the project during the fourth quarter. Both Total New Dollars and Total New & Existing dollars are addressed. This must be completed for the project to be reviewed.
Total Initial Dollars yet to be spent	The difference in the total initial costs and the total spent through 6/30/04.
CBA Approval Dates:	<p>Last Approved by Sponsor: The date when the sponsor last authorized this version of the cost benefit analysis. Approval of all assumptions, funding, costs, and benefits is assumed.</p> <p>Last Approved by Agency Budget or Fiscal Office: The date when this person last authorized this version of the cost benefit analysis. Approval of all assumptions, funding, costs, and benefits is assumed.</p> <p>Last Approved by MAC: The date when the MAC last authorized this version of the cost benefit analysis. Approval of all assumptions, funding, costs, and benefits is assumed.</p>
SDF Principal Payback	A repeat of the SDF principal payback funding identified on page 3 of the Financial Summary.

Appendix H -- Financial Summary (cont.)

Page 2

Total Project Cost (Including New and Existing Dollars)	The total project cost includes both initial costs plus operational costs. All of these costs are totaled for all years and are also indicated in the projected year of expenditure with Year One as the first year of project work. These costs are automatically pulled from the Initial and Operational Cost Assessment worksheets using formulas in each cell.																														
New Dollar Costs Only	The total project costs includes both initial costs and operational costs that were identified as new dollar costs. These costs are automatically pulled from detailed costs on the Initial and Operational Cost Assessment worksheets using formulas in each cell.																														
Financial Benefit Summary	Dollar values for increased agency revenue and decreased costs from the Benefits Assessment worksheet. These values are automatically pulled from the benefit assessment worksheet using formulas in each cell.																														
Cumulative New Cost / Benefit Calculation	<p>Cumulative Initial Costs: The total new dollars initial cost of the project accumulated. In the example below, a \$100,000 project over two years with \$40,000 spent in the first year and \$60,000 spent in the second year will show \$40,000 in Year One, \$100,000 in Year Two and \$100,000 in all subsequent years.</p> <p>Cumulative Operational Costs: The annual operational cost is accumulated in each year beginning in the year after implementation. In the example below, operational costs are \$15,000 for each of the first two years of operation and then fall to \$5,000 for all subsequent years.</p> <p>Cumulative Benefits: The total one time and annual benefits achieved to date. In the example below, a one time benefit of \$90,000 upon implementation of the project in year three and an annual benefit thereafter of \$30,000 would show \$0 in year one, \$0 in year two, \$90,000 in year three, \$120,000 in year four, \$150,000 in year five.</p> <p>Cumulative Costs Minus Benefits: The cumulative costs minus the cumulative benefit for each year. In the example below, Year One would be \$40,000, Year Two \$100,000, Year Three \$25,000, Year Four \$10,000, and Year Five \$10,000. Yearly calculations can stop as soon as a negative number is reached. The year in which the negative number is reached is the Payback Year.</p> <table><thead><tr><th></th><th>Year 1</th><th>Year 2</th><th>Year 3</th><th>Year 4</th><th>Year 5</th></tr></thead><tbody><tr><td>Cumulative Initial Costs</td><td>\$40,000</td><td>100,000</td><td>100,000</td><td>100,000</td><td>100,000</td></tr><tr><td>Cumulative Operational Costs</td><td>0</td><td>0</td><td>15,000</td><td>30,000</td><td>35,000</td></tr><tr><td>Cumulative Benefits</td><td>0</td><td>0</td><td>90,000</td><td>120,000</td><td>150,000</td></tr><tr><td>Cumulative Cost Minus Benefits</td><td>40,000</td><td>100,000</td><td>25,000</td><td>10,000</td><td>(15,000)</td></tr></tbody></table> <p>Payback Year: Year 5</p> <p>NOTE that all values in the cumulative cost/benefit calculations are automatically calculated using formulas in each cell.</p>		Year 1	Year 2	Year 3	Year 4	Year 5	Cumulative Initial Costs	\$40,000	100,000	100,000	100,000	100,000	Cumulative Operational Costs	0	0	15,000	30,000	35,000	Cumulative Benefits	0	0	90,000	120,000	150,000	Cumulative Cost Minus Benefits	40,000	100,000	25,000	10,000	(15,000)
	Year 1	Year 2	Year 3	Year 4	Year 5																										
Cumulative Initial Costs	\$40,000	100,000	100,000	100,000	100,000																										
Cumulative Operational Costs	0	0	15,000	30,000	35,000																										
Cumulative Benefits	0	0	90,000	120,000	150,000																										
Cumulative Cost Minus Benefits	40,000	100,000	25,000	10,000	(15,000)																										
Year of Payback	Enter the year at which there is a transition from a positive number to a negative number on the Cumulative Cost Minus Benefit line. This is the point at which the system / technology pays for implementation with savings or revenue. This year will range from 1 to 10+. A payback of 10+ years may indicate that enhanced service benefits are the justification for the project.																														
Soft Dollar Financial Benefits	These values are automatically pulled from the benefit assessment worksheet using formulas in each cell.																														

Appendix H -- Financial Summary (cont.)

Page 3	
Net New Costs to be Funded	The values calculated under each year represent the difference between new dollar costs and hard dollar benefits. Any positive amount in any of these cells represents the new dollar funding that must be identified by the agency.
Funding Sources	<p>This section identifies possible funding sources for new dollar costs of the project. Under the appropriate Fiscal Year that has a dollar amount in Net New Costs to be Funded, identify the funding breakdown to cover the fiscal year's new dollar costs. Total New Funding (Row 85) by year, should equal the amount shown on Net New Costs to be Funded (Row 74), such that the Unfunded Costs (Row 86) are zero.</p> <p>There are several funding sources for new Information Technology Projects. One source or combinations of these sources can be indicated.</p> <ul style="list-style-type: none"> • STATE <ul style="list-style-type: none"> • Systems Development Fund (SDF) is a mechanism for funding large application development projects. State agencies must repay funds used from either option below. The payback period for SDF-A and SDF-H is normally not over five years. The Information Systems Council determines expenditure from this fund based on the recommendation of the Commissioner of F & A. SDF-A and SDF-H funding is generally available only for projects of \$100,000 or more. In addition, for planning purposes 10.0% should be applied to the cost of borrowing SDF-H funds. This cost should be shown as a separate item on the Operational Cost Assessment work sheet under the cost category "General Administrative Fee (SDF)." NOTE that a general administrative fee is <u>not</u> applied to funds borrowed from SDF-A. • Application Development (SDF-A): Systems Development Fund dollars are used for information systems application costs. • Hardware (SDF-H): Projected dollars are used to purchase equipment and non-application system software. • Equipment Replacement Fund (ERF): Projected dollars used to replace desktop hardware. A two percent (2%) administrative fee will be applied to the annual escrow payment. • State Improvement (SI) is a funding source / budget item that the agency requests in their next fiscal year. Both administration and legislative approval is required. This funding source is only appropriate for Year Two projects. • State Continuance (SC) indicates that the money for the system or technology already exists in the agency's base budget. • FEDERAL (F) dollars are funds the Federal government has approved or is expected to approve for specific projects. • OTHER (O) dollars can come from a variety of sources. NOTE that the Project Proposal and Cost Benefit Analysis documents should clearly identify the source of funds designated as "other." Reserve funds are one type of "other" funding source.
Existing Costs Funding to be Specified	This section identifies funding sources for existing costs of the project. Under the appropriate Fiscal Year that has a dollar amount in Existing Costs Funding to be Specified, identify the funding breakdown to cover the fiscal year's existing dollar costs. Total Existing Funding, by year, should equal the amount shown on Existing Costs Funding to be Specified. See definition of sources above.
SDF Payback by Fiscal Year	If SDF-A or SDF-H funding is identified in Rows 76-77, then those amounts borrowed will appear in Rows 96-97 as well.
SDF Principal Payback Funding Sources	Rows 102-107 identify possible funding sources for SDF payback. Identify the funding amounts for the appropriate years in Row 102-107 to cover the SDF payback. NOTE that SDF payback typically begins in the year that the funds are borrowed. SDF-A and SDF-H payback is typically 5 years. ERF escrow is typically 4 years.
Funding and SDF Payback Comments	Use Row 111-115 to provide comments or further explanation of project funding. For example, if "Other" funding is specified, use these rows to define the source of the "Other" funding.